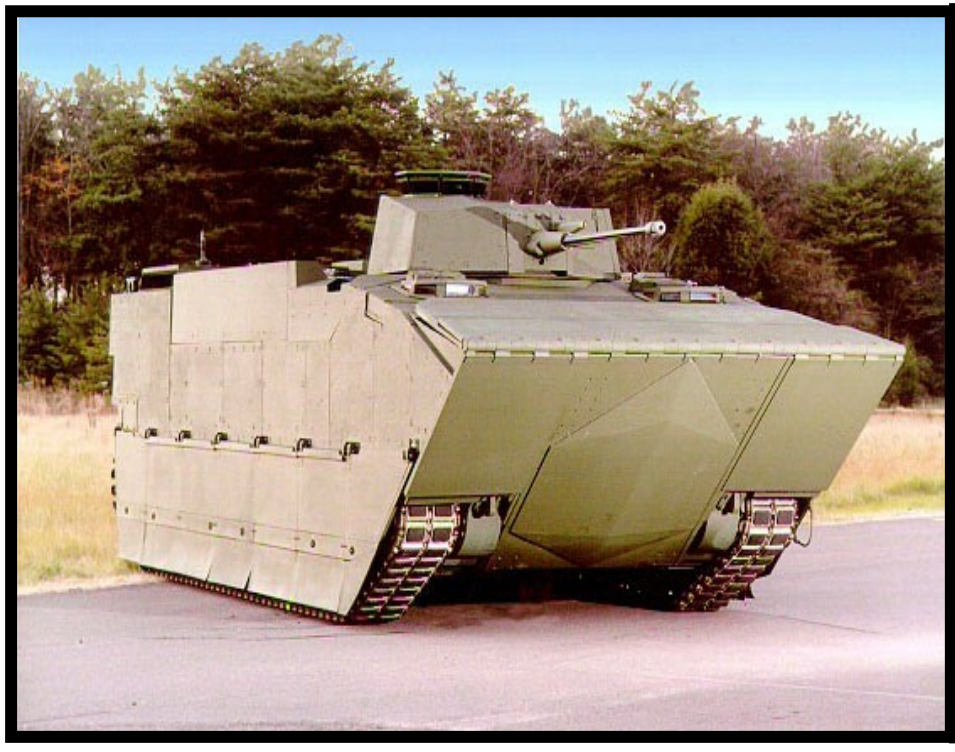
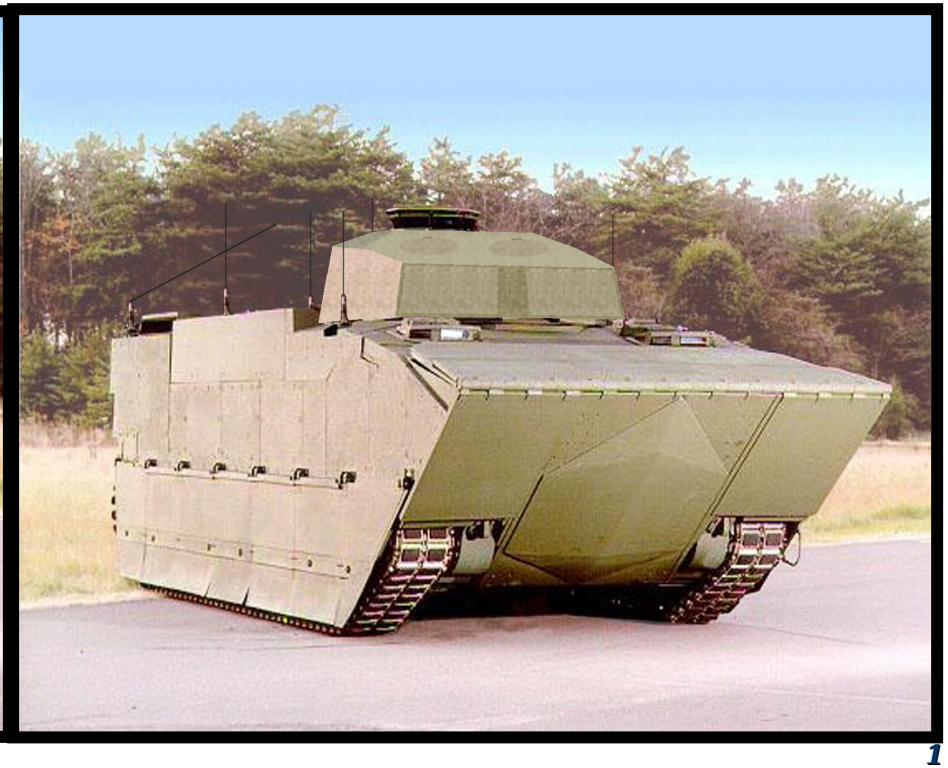
AAAV Interoperability WIPT

17 December 2002






AAAV

AAAV Interoperability WIPT

1200 - 1210	Welcome Aboard	Mr. Bayard LtCol Oldland
1210 - 1220	AAAV Program Overview	Major Wedge
1220 - 1300	Operational Architecture Effort	Captain Vose
1300 - 1345	JTRS Architecture Analysis	Mr. Nichols
1345 - 1415	System Architecture Effort	Mr. Smith
1415 - 1430	Break	
1430 - 1500	Global Information Grid	Mr. Szabados
1500 - 1515	POA&M AAAV C4ISP	Mr. Claiborne
1515 - 1530	C4ISP Review Process	Mr. Claiborne
1530 - 1545	AAAV C4ISP	Mr. Claiborne
1545 - 1600	Questions/Action Items	Mr.

WIPT Overview

Major Jim Wedge

C4I Systems Engineering

AAAV Interoperability Working Group (IWG)

- AAAV IWG held 9 May 2002
- Attendance by MCOTEA, MCCDC, MCWL, MCTSSA, MCSC (SE&I, IA, CID, UOC, AAV, LAV, COM), DSN, DASN (C4I/EW/SPACE), OASD (C3I), JSF, JITC, OSD (DTE, DOT&E), and AAAV
- Topics Discussed at IWG
  - AAAV Program Brief
  - AAAV Concept of Employment
  - AAAV C4I Support Plan
  - AAAV C4I Testing
  - MCOTEA Interoperability Test Strategy
  - Information Assurance
  - JITC

SDD E-2 and C1 Platform Schedule

- E-2 (AAAV-P)
  - Functional Integration 1/03 - 3/03
  - Shakedown (GD) 4/03 - 8/03
  - Acceptance 9/03
  - DT (Govt/GD) 10/03 - 2/04
- C-1 (AAAV-C)
  - Functional Integration 1/03 - 4/03
  - Shakedown (GD) 5/03 - 9/03
  - Acceptance 10/03 - 11/03
  - EMI 12/03
  - DT (Govt/GD) 1/04 - 2/04

AAAV Interoperability WIPT Purpose

- Provide focused forum for the preparation of the MS C AAAV C4ISP.
- Provide opportunity for up front review and discussion of interoperability issues directly linked to AAAV, Marine Corps, Joint/Coalition challenges.
- Continue to leverage external expertise to improve AAAV development and planning.

AAAV C4ISP: POA&M

Mr. Steve Claiborne

C4I SE Interoperability

AAAV C4ISP POA&M

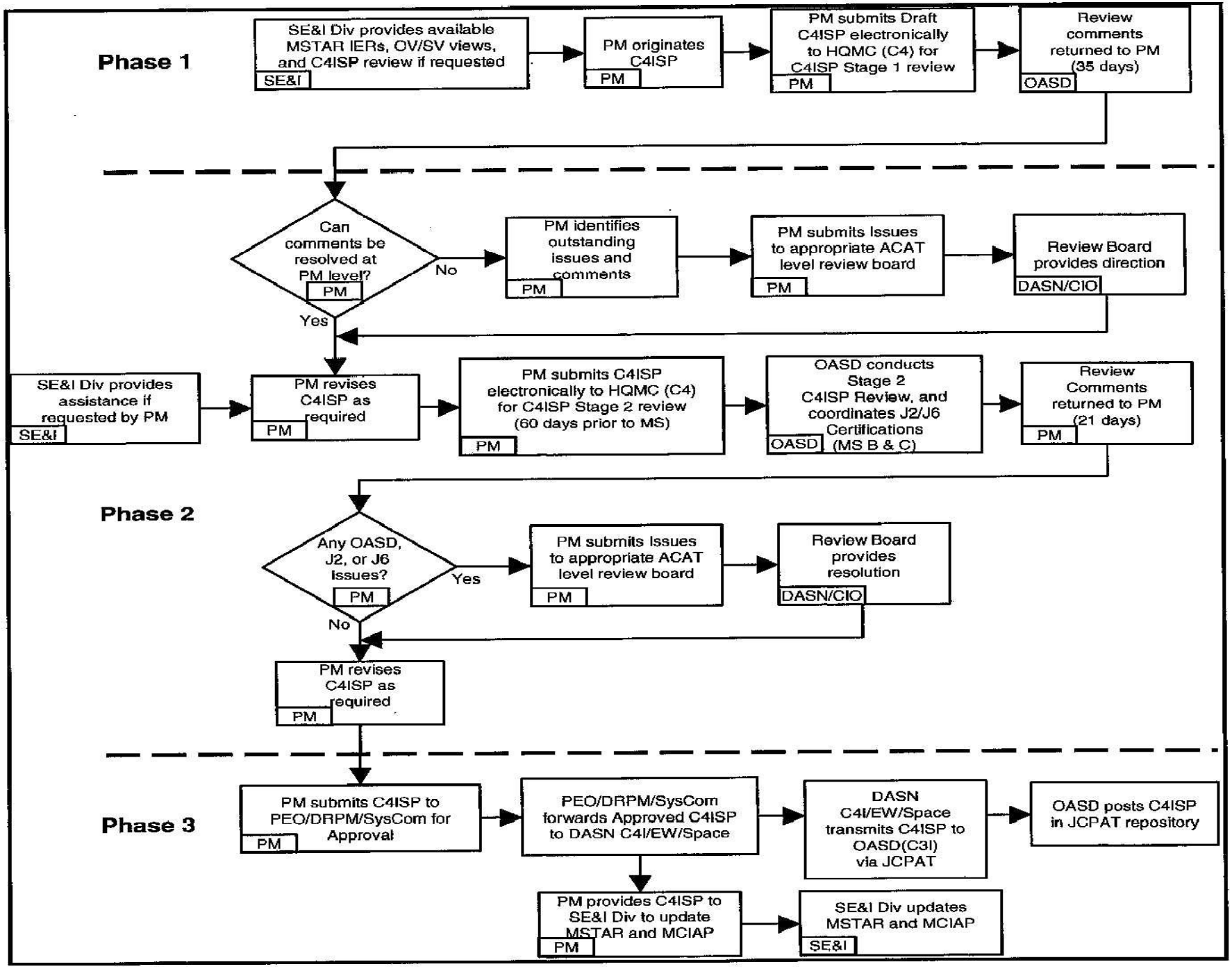
12/18/02 - 2/12/03	Review/Comments/Consolidation Sections 1, 2, and 3
2/13/03	WIPT
2/14/03 - 4/17/03	Review/Comments/Consolidation Section 4
4/18/03	WIPT
4/21/03 - 7/02/03	Review/Comments/Consolidation Section 5 and Appendices
7/8/03	WIPT
7/9/03 - 8/6/03	AAAV C4ISP: Finalize for Submission to Stage 1 Review
8/7/03	Submission to HQMC C4
8/12/03	HQMC C4 Submission to JCPAT: Stage 1
10/2/03 - 10/21/03	DRPM AAA Review of JCPAT Comments

AAAV C4ISP POA&M

10/24/03	WIPT: Results/Responses to Stage 1 Review
10/27/03 - 11/13/03	Incorporation of Responses to Stage 1Comments
11/22/03	Submit C4ISP to JCPAT Stage 2 Review
12/22/03 - 1/23/04	DRPM AAA Review of JCPAT Comments
1/26/04	WIPT: Results/Responses to Stage 2 Review
1/27/04 - 2/18/04	Incorporation of Responses to C4ISP
2/19/04 - 3/22/04	Finalize C4ISP for Final Submission
3/24/04	Submit AAAV MS C C4ISP

AAAV C4ISP: Modification & Review Process

Mr. Steve Claiborne
C4I SE Interoperability


Phase 1
SE&I Div provides available MSTAR IERs, OV/SV views, and C4ISP review if requested
SE&I
PM originates C4ISP
PM
PM submits Draft C4ISP electronically to HQMC (C4) for C4ISP Stage 1 review
PM
Review comments returned to PM (35 days)
OASD
Can comments be resolved at PM level?
PM
No
Yes
PM identifies outstanding issues and comments
PM
PM submits Issues to appropriate ACAT level review board
PM
Review Board provides direction
DASN/CIO
SE&I Div provides assistance if requested by PM
SE&I
PM revises C4ISP as required
PM
PM submits C4ISP electronically to HQMC (C4) for C4ISP Stage 2 review (60 days prior to MS)
PM
OASD conducts Stage 2 C4ISP Review, and coordinates J2/J6 Certifications (MS B & C)
OASD
Review Comments returned to PM (21 days)
PM
Phase 2
Any OASD, J2, or J6 Issues?
PM
Yes
No
PM submits Issues to appropriate ACAT level review board
PM
Review Board provides resolution
DASN/CIO
PM revises C4ISP as required
PM
Phase 3
PM submits C4ISP to PEO/DRPM/SysCom for Approval
PM
PEO/DRPM/SysCom forwards Approved C4ISP to DASN C4I/EW/Space
DASN C4I/EW/Space transmits C4ISP to OASD(C3I) via JCPAT
OASD posts C4ISP in JCPAT repository
PM provides C4ISP to SE&I Div to update MSTAR and MCIAP
PM
SE&I Div updates MSTAR and MCIAP
SE&I

AAAV MS II (B) C4ISP

Mr. Steve Claiborne

C4I SE Interoperability

C4ISP: Framework

- The C4ISP is composed of :
  1. Introduction
  2. System Description
  3. Operational Employment

  3.1 Operational Employment Concept

  3.1.1 Operational Architecture Views

  3.1.2 Information Exchange Requirements (IERs)

  3.2 Operational Employment Requirements

  3.3 Systems Architecture View

  3.4 Systems IER Matrix Information

  3.5 Technical Architecture

C4ISP: Framework (cont.)

3.6 Defense-Wide Integrated Architectures

4. Derived C4I Support Requirements

4.1 C4ISR Support to Operations

4.1.1 C4 Support to Operations

4.1.2 ISR Support to Operations

4.2 C4ISR Support to Other Functions

4.2.1 C4ISR Support to Development

4.2.2 C4ISR Support to Testing

4.2.3 C4ISR Support to Training

C4ISP: Framework (cont.)

5. Potential C4I Support Shortfalls and Proposed Solutions
   - 5.1 Operational Employment Shortfalls
   - 5.2 Other Shortfalls
     - 5.2.1 Development Support Shortfalls
     - 5.2.2 Testing Support Shortfalls
     - 5.2.3 Training Support Shortfalls

Appendix A - References

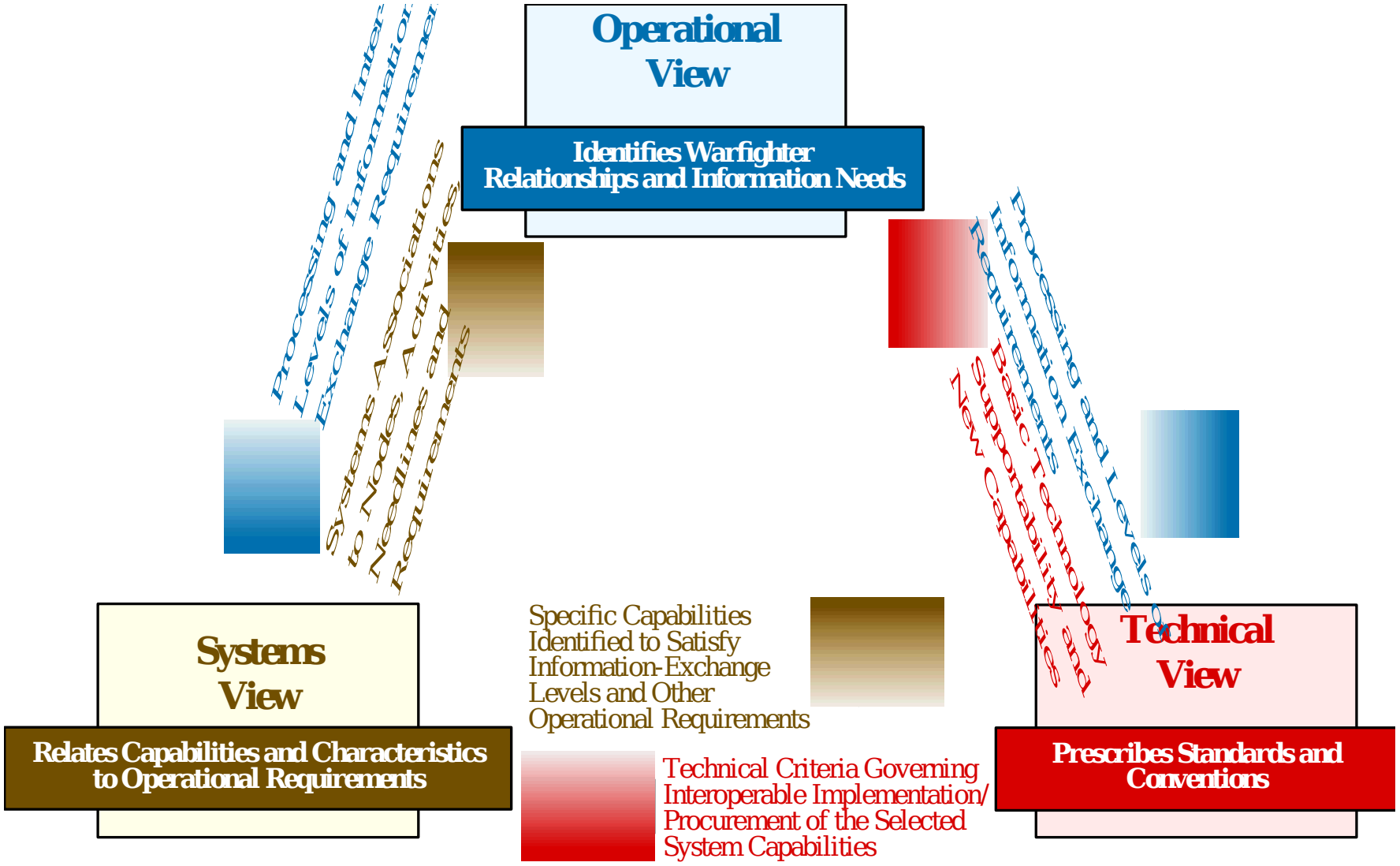
Appendix B - IERs

Appendix C - Technical Standards

Appendix D - Interface Control Agreements

Appendix E - Acronym List

Linkages Among Views



C4ISR Framework Products

Applicable Architecture View	Product Reference	Architecture Product	Essential or Supporting	General Nature
All Views (Context)	AV-1	***Overview and Summary Information***	**Essential**	Scope, purpose, intended users, environment depicted,analytical findings, if applicable *(4.2.1.1)*
All Views (Terms)	AV-2	***Integrated Dictionary***	**Essential**	Definitions of all terms used in all products *(4.2.1.2)*
Operational	OV-1	***High-level Operational Concept Graphic***	**Essential**	High-level graphical description of operational concept (high-level organizations, missions, geographic configuration, connectivity, etc. *(4.2.1.3)*
Operational	OV-2	***Operational Node Connectivity Description***	**Essential**	Operational nodes, activities performed at each node, connectivities & information flow between nodes *(4.2.1.4)*
Operational	OV-3	***Operational Information Exchange Matrix***	**Essential**	Information exchanged between nodes and the relevant attributes of that exchange such as media, quality, quantity, and the level of interoperability required. *(4.2.1.5)*
Operational	OV-4	***Command Relationships Chart***	Supporting	Command, control, coordination relationships among organizations *(4.2.2.1)*
Operational	OV-5	***Activity Model***	Supporting	Activities, relationships among activities, I/Os, constraints (e.g., policy guidance), and mechanisms that perform those activities. In addition t showing mechanisms, overlays can show other pertinent information. *(4.2.2.2)*
Operational	OV-6a	***Operational Rules Model***	Supporting	One of the three products used to describe operational activity sequen timing that identifies the business rules that constrain the operation *(4.2.2.3.1)*
Operational	OV-6b	***Operational State Transition Description***	Supporting	One of the three products used to describe operational activity sequen timing that identifies responses of a business process to events *(4.2.2.3.2)*
Operational	OV-6c	***Operational Event/Trace Description***	Supporting	One of the three products used to describe operational activity sequen timing that traces the actions in a scenario or critical sequence of eve *(4.2.2.3.3)*
Operational	OV-7	***Logical Data Model***	Supporting	Documentation of the data requirements and structural business process rules of the Operational View. *(4.2.2.4)*

C4ISR Framework Products

Systems	SV-1	***System Interface Description***	**Essential**	Identification of systems and system components and their interfaces, within and between nodes *(4.2.1.6)*
Systems	SV-2	***Systems Communications Description***	Supporting	Physical nodes and their related communications systems and communications links *(4.2.2.5)*
Systems	SV-3	***Systems-Systems Matrix***	Supporting	Relationships among systems in a given architecture; can be designed to show relationships of interest, e.g., system-type interfaces, planned vs. existing interfaces, etc. *(4.2.2.6)*
Systems	SV-4	***Systems Functionality Description***	Supporting	Functions performed by systems and the information flow among system functions *(4.2.2.7)*
Systems	SV-5	***Operational Activity to System Functionality Traceability Matrix***	Supporting	Mapping of system functions back to operational activities *(4.2.2.8)*
Systems	SV-6	***System Information Exchange Matrix***	Supporting	Detailing of information exchanges among system elements, applications and H/W allocated to system elements *(4.2.2.9)*
Systems	SV-7	***System Performance Parameters Matrix***	Supporting	Performance characteristics of each system(s) hardware and software elements, for the appropriate timeframe(s) *(4.2.2.10)*
Systems	SV-8	***System Evolution Description***	Supporting	Planned incremental steps toward migrating a suite of systems to a more efficient suite, or toward evolving a current system to a future implementation *(4.2.2.11)*
Systems	SV-9	***System Technology Forecast***	Supporting	Emerging technologies and software/hardware products that are expected to be available in a given set of timeframes, and that will affect future development of the architecture *(4.2.2.12)*
Systems	SV-10a	***System Rules Model***	Supporting	One of three products used to describe systems activity sequence and timing -- Constraints that are imposed on systems functionality due to some aspect of systems design or implementation *(4.2.2.13.1)*
Systems	SV- 10b	***Systems State Transition Description***	Supporting	One of three products used to describe systems activity sequence and timing -- Responses of a system to events *(4.2.2.13.2)*
Systems	SV -10c	***Systems Event/Trace Description***	Supporting	One of three products used to describe systems activity sequence and timing -- System-specific refinements of critical sequences of events described in the operational view *(4.2.2.13.3)*
Systems	SV-11	***Physical Data Model***	Supporting	Physical implementation of the information of the Logical Data Model, e.g., message formats, file structures, physical schema *(4.2.2.14)*

Technical	TV-1	***Technical Architecture Profile***	**Essential**	Extraction of standards that apply to the given architecture *(4.2.1.7)*
Technical	TV-2	***Standards Technology Forecast***	Supporting	Description of emerging standards that are expected to apply to the given architecture, within an appropriate set of timeframes *(4.2.2.15)*

C4ISP Action Items

Item #	Description	Lead Organization	POC	Results
W-IPT – 001	C4ISP Review/Approval Steps within the USMC	DRPM	Steve Claiborne	MCSC,DASN C4, HQMC C4, and DRPM AAA coordination (MCSC CMP, Appendix G).
W-IPT – 002	Specify applicability of CID requirements by the 4 domains	DRPM	Steve Claiborne	The JROC-signed CID CRD addresses all four domains. The AAAV will address its requirements to operate in a surface-to-surface (Ground-to-Ground) engagement. The air-to-surface has been identified as an area of concern by the air community. FY04 ACTD activity is exploring technology solutions for ground ID by the aircraft based upon MMW capabilities.
W-IPT – 003	Routing of C4ISP to MATCOM?	DRPM	Steve Claiborne	MATCOM is not within the review process. HQMC C4 as the final Marine Corps repository will have document for reference.

Back-up Slides

AAAV Clinger-Cohen Act Path Forward

- C4ISP will be updated in support of MS-C
- C4I Test Planning in Process
- Information Assurance Planning and Documentation in Process
  - Interoperability
  - Security Accreditation
  - Electromagnetic Environmental Effects (E3)
  - Spectrum Management
- JITC will be performing Combined DT/OT for Interoperability

CCA Requirement (Paragraph 4.7.3.2.3.2 DoDI 5000.2)	Compliance Source	Latest/Pending Approval Date for compliance	Page	Paragraph or Figure /Table #	Example of Source Documents
***Make determination that the acquisition supports core priority functions of the Department					MNS/ICD
*** Establish outcome-based performance measures linked to strategic goals.					MNS,ORD, ICD, CDD, CPD and APB
*** Redesign the processes to reduce costs, improve effectiveness and maximize the use of COTS technology.					MNS, Concept of Operations, AoA, ORD, ICD, CDD, and CPD
* No private sector or government source can better support the function.[1]					Acquisition Strategy page XX, & AoA page XX
* An Analyses of Alternatives has been conducted.[1]					AOA
* An economic analysis has been conducted that includes a calculation of the return on investment; or for non-AIS programs, an LCCE has been conducted.[1]					Program LCCE, Program Economic Analysis for MAIS
There are clearly established measures and accountability for program progress					Acquisition Strategy page XX; APB
The acquisition is consistent with the Global Information Grid policies and architecture, to include relevant standards					APB (Interoperability KPP); C4ISP (IERS)
The program has an information assurance strategy that is consistent with DoD policies, standards, and architectures, to include relevant standards					Information Assurance Strategy
To the maximum extent practicable, (1) modular contracting has been used, and (2) the program is being implemented in phased, successive blocks, each of which meets part of the mission need and delivers a measurable benefit, independent of future blocks.					Acquisition Strategy page XX

	DoN or OSD	Registration ID #	Last Update Date	
The system being acquired is registered.				Registration database

* For weapons systems and command and control systems, these requirements apply to the extent practicable (40 U.S.C. §1451)

** The system documents/information cited are examples of the most likely but not the only references for the required information.

If other references are more appropriate, they may be used in addition to or instead of those cited.

*** These requirements are presumed to be satisfied for Weapons Systems with embedded IT and for